REVITALISATION OF LARGE-PANEL HOUSING ESTATES AS A CHANCE FOR THE CREATION OF CONTINUITY AND COMPLEMENTARITY OF PUBLIC SPACE IN THE CONTEMPORARY CITY

Eliza Szczerek
M.Sc. Arch., Research Assistant
Chair of Public Spaces for Movement
Institute of Urban Design
Faculty of Architecture, Cracow University of Technology
ul. Podchorążych 1, 30-084 Cracow, Poland
+48 12 628 3113
eszczerek@pk.edu.pl
+48 501 337 652

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Abstract
Large-panel housing estates have become a permanent element in the landscape of numerous European towns and cities, especially in the eastern part of the continent. Initially, they evoked delight and gave hope for a better housing environment. Then their picture changed radically, when it turned out that in numerous cases they were becoming a place of spatial and social pathology. The search of solutions to the problem, and – depending on capacities – undertaking remedial measures – this is the next stage in their existence. Nevertheless, it pertains most of all to wealthier European states, with Germany being in the lead in this respect.
In Poland, such housing estates are still referred to as crisis areas, but so far no systematic approach to the improvement of their situation has been adopted. This could be changed by works undertaken predominantly in the second decade of the 21st century at the governmental level, devoted to an efficiently functioning system allowing for systematic revitalisation activities. In the context of housing estates, they can constitute a chance not only for the crisis elimination, but also for the creation of a high-quality housing environment, corresponding to new and constantly changing needs of the 21st-century society and complementary towards other housing structures of the city.
The goal of this paper is to present a synthesis of issues connected with the revitalisation of large-panel housing estates depending on their characteristics and conditions, which constitutes a case study upon the example of two housing estates located in Cracow. These problems are also demonstrated in the context of methods of improving of the quality and building of the continuity of urban public spaces using the potential offered by the space of open housing estates.

Urban development of cities is a constant process of changes. The occurrence of large-panel housing estates had a significant effect on their functioning at a large scale. What differentiates
them from the classical urban tissue is – without limitations – a different development structure with the so-called negative spaces, frequently referred to as ‘anti-space’. Hence since the very moment when housing estates came into being they have been one of the key subjects of deliberations devoted to the city and its urbanism.

Large-panel housing estates, with a number of their ‘genetic’, but also ‘acquired’ defects, to a considerable extent do not inscribe in the urbanism understood in a classical way. Nevertheless, complete negation of their potential does not seem to be justified. Searching for complementarity and uniqueness in their spaces may constitute a chance to change their negative picture. Their future, as well as the future of cities, depends on the undertaken measures. The return of the sense of the city taking into account problems of large-panel housing estates, enriched with the experience of previous generations and taking the current and future needs into account, may provide new interesting solutions.

The past

The concepts of modernism together with the lurking hope for a healthy housing environment with access to light, air, greenery, and improvement of sanitary conditions, confronted with cramped dark tenements, constituted essential primary factors that influenced the occurrence of large-panel housing estates. Further ideological context of the process of their shaping was predominantly connected with a number of social and political conditions, especially referring to Eastern Europe.

Large-panel housing estate projects constitute the attempts at the embodiment of the concepts and creative ideas, confronting them with the reality at the same time. In this case they are connected with e.g. the need to satisfy the post-war demand for housing opportunities, by providing a large number of flats in a relatively short period of time, making use of the then technological possibilities. Nevertheless, frequently technological reasons dictated architectural and urban solutions, which had a negative effect on the shape of housing estates. What deserves appreciation is a number of well-thought-out designs, expressing the pursuits to create a complete valuable housing environment, inspired by e.g. the concept of ‘the neighbourhood unit’, and with a full functional programme. Unfortunately, these concepts in their full form most often remained only on paper.

The stage of implementation, during which the final form of housing estates would emerge, in their case was especially significant due to numerous factors that had a negative effect on them. Hence, housing estates after their construction differed a lot from their design, much to

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1 This pertains most of all to the countries of the Eastern Bloc, where the construction of ‘housing estates for masses’ was an important element of the socialist authorities’ propaganda.

2 It resulted from e.g. the need to supplement the housing resources depleted due to war demolitions and to secure new flats to meet the needs connected with the intense rise of populations in cities caused by migration of inhabitants of villages during the industrialisation of the country and by the population boom.

3 E.g. distances between blocks of flats were adjusted most of all to the spacing of the crane rails.

4 Special attention should be paid to experimental projects, developed within the scheme of the governmental programme PR-5, aiming at testing of innovative solutions for housing estates. The following designs were developed at the time: Białołęka Dworska housing estate in Warsaw (designed by Halina Skibniewska), Stella in Tychy (designed by Hanna Adamczewska-Wejchert and Kazimierz Wejchert), Chelmnoński housing estate in Cracow (designed by Witold Cęckiewicz), and Nowe Miasto II in Zamość (designed by Jan Bohdan Jezierski). Only the last one was implemented.
their detriment. Many times it was caused by the incomplete implementation of the programme, which would boil down merely to providing residences, neglecting services to a considerable extent. Furthermore, the increase of the number of flats was often at the expense of open areas, and for this reason it deepened the spatial and functional pathology. The situation was additionally aggravated when construction companies became the only units that decided about the final form of a building, and designers’ possibility of enforcing the author’s supervision were limited. As a result, such factors as normatives, technological requirements and economic pseudo-optimisation, contributed to the final shape of most large-panel housing estates.

Figure 1. The main stages of implementation of large-panel housing estates and factors that had a special effect on their final shape

In consequence, in numerous cases it is difficult to treat large-panel housing estates as fully valuable parts of the city, despite the fact that under the provisions of the act that defines a housing estate as ‘a housing complex which constitutes an integral part of the city, town or village’, it should be expected from it.

The present

Functioning of large-panel housing estates in the 21st century in Poland is burdened with a number of their ‘genetic’ defects, as well as the ongoing changes, which often exhibit unfavourable tendencies. In the context of the former, such defects comprise monofunctionality, monotony of development, undefined spaces, often referred to as ‘nobody’s land’ and the land

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5 This problem was tackled during the implementation of the Governmental Programme PR-5 in the period 1976-1979 and described in the following publication: Cęckiewicz W., Franta A., Palej A. Przemiany w strukturze programowej i przestrzennej osiedli mieszkaniowych w Polsce. Wnioski z analizy zespół powstających w latach 1960-1978, Monograph 49, Publishing House of the Cracow University of Technology, Cracow 1986

6 This situation is well reflected in the following quotation: ‘you build wastefully; insert blocks of flat between the ones that are already there’, cited as memories of J. Ingarden, delivered in 1979 to the author [in:] Kosiński W., Piękno i brak piękna zielonej szaty w osiedlach II RP, PRL, oraz III RP w stronę urbanistyki krajobrazu, in: Przestrzeń i Forma ’16 2011, p.38


8 Act dated 29 August 2003 on Official Names of Towns and Physiographic Objects. The Author is aware of the fact that this definition does not render the full essence of housing estates; nevertheless, it touches upon an important problem that housing estates struggle with – their integration with spaces of cities.
with which nobody identifies, the lack of integration of the housing estates with the remaining part of the city, which is responsible for the fact that they are dormitories rather than standard city quarters. The problems referred to above are often accompanied by negative spatial changes in housing estates. They get chaotically densified by the introduction of new buildings in quite haphazard locations, without any prior development plan for the housing estate. This situation is already common and it leads to irreversible spatial changes which disturb their urban layout. At the same time, the greatest potential of housing estates, which is the resource of green areas, is annihilated. Structures of different functions are introduced – including residential buildings - which additionally strengthen the feeling of monofunctionality of the estate. New residential buildings are connected with increased demand for additional parking spaces. Considering the fact that over the last two decades the number of cars have increased considerably and consequently the number of parking spaces available is no longer sufficient even for residents of blocks of flats, it is becoming a serious spatial issue. It all results in the occurrence of squatting parking lots, illegally annexing green areas. Furthermore, residential structures are often separated from the rest of the housing estate. Not only does it disturb the layout of the housing estate causing its defragmentation, but it additionally introduces an unhealthy tendency of polarising its community, dividing residents into the more and less wealthy ones. It is not a desirable situation, especially considering the fact that another negative tendency is the disappearance of social diversity. Since 1990s a gradual change of the social structure has been observed, consisting in leaving of housing estates by the more well-off part of society and replacing it with the poorer one.

Technical degradation of large-panel buildings constitutes another serious problem for the functioning of housing estates. Defectively manufactured prefabricates, poor quality of materials, inappropriate transport of large elements causing their damage, or, finally, assembly errors – these are the main reasons why the technical condition of large-panel blocks of flats deteriorates. This in turn has its effect on lowering of the standards of use of flats built in this technology, and consequently it lowers the quality of the housing environment. An example of housing estates which have been struggling with the issues referred to above to varying degrees are housing estates located in Cracow, most of which have been recognised as problematic areas, as defined in the ‘Study of Development Conditions and Directions of the City of Cracow’: ‘Complexes of multi-family housing estates are a component of the housing tissue which dominates the space in terms of its territory and sizes. Within this group there are complexes which concentrate the largest number of people, with a clearly monofunctional character [...]. They do not satisfy the currently valid standards in the field of basic services, technical support facilities (parking lots), and the quality of public spaces. Additionally, in this areas there occurs the phenomenon of densification of development complexes with new residential buildings, often different in terms of scale and style from the existing substance, which intensifies the spatial and functional dissonance’. In compliance with the document

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referred to above, most housing estates in Cracow have been recognised as areas requiring remedial measures, defined as rehabilitation\textsuperscript{10}.

The future - the chance

In Poland large-panel housing estates are recognised as crisis areas more and more frequently\textsuperscript{11}. Therefore, it seems that their lifecycle should be completed with the next stage, that is their planned systematic revitalisation, providing them with a chance for a new quality and better future.

The current manner in which housing estates function today and the unfavourable tendencies referred to above constitute – as it has been demonstrated – a great threat of further degradation, and they are contrary to their further development. The lack of any remedial measures and of a definition of the appropriate directions for their development may be incredibly important in the scale of the entire city. Its defective parts in the form of housing estates will not constitute valuable spaces as a specific completion and an alternative urban structure.

Revitalisation of housing estates, which on one hand refers to the modernist principle of creating a healthy housing environment, with appropriate insolation, large quantities of fresh air and greenery, and on the other is based on a sensitive approach, taking into account diversified needs of residents, provides a chance for the creation of a valuable housing environment. The process of shaping of housing estates could be then demonstrated by means of the following diagram:

**Figure 2. Stages of shaping of large-panel housing estates taking revitalisation into account**

![Diagram](image)

\textsuperscript{10} In Cracow the phrase ‘rehabilitation’ is used with reference to housing estates, stressing that rehabilitation of areas of block development of housing estates constitutes a crucial element of city rehabilitation processes [in:] collective work, Adamski, J. team leader, \textit{Założenia programu rehabilitacji zabudowy blokowej na terenie Gminy Miejskiej Kraków}, Institute of Urban Development, Cracow 2010, Appendix to the Resolution No. CXV/1587/10, p. 4

The characteristic feature of large-panel structures, which is their urban layout abundant in many open spaces, may become a starting point for deliberations devoted to the complementarity of such forms as the traditional urban tissue and housing estate structure\(^{12}\). Broad possibilities of arranging open spaces as spaces connected with nature, sports and recreation, etc., may provide them with a new quality, which is impossible to reach in the traditional urban tissue. Finding the potential of the housing estate and extracting its characteristic features, spatial values, etc. are measures which offer the chance for the creation of a unique housing environment.

As far as housing estates in Cracow are concerned, many of them exhibit unique spatial values, such as vicinity of watercourses, green areas, or areas with historic and cultural values. This offers an extraordinary chance for strengthening of the identification of space. An example in this respect could be the housing estates located in Czyżyny – Dywizjonu 303 and II Pułku Lotniczego housing estates\(^{13}\). They are located on both sides of the former runway of the airport in Czyżyny, whose spatial, historical, and cultural values may allow it to become a unique symbol in the scale of the entire city.

The housing estates referred to above are located in the 14\(^{th}\) Quarter of Czyżyny, ca. 7 km from the city centre. They belong to the northern belt of the development of Cracow, occupying its eastern part. Their genesis, similarly to the genesis of numerous other housing estates situated in this part of the city, is connected with the extension of a new city – Nowa Huta. The airport in Czyżyny was built in 1912 and, successively extended, it became the second largest airport in Poland before the World War II. Along with the construction of a metallurgical plant and the erection of housing estates its operation was gradually limited, and finally in 1963 a decision was taken to close it completely\(^{14}\). The airport was transferred to Balice, and in 1978 the development of these areas was launched, creating the Dywizjonu 303 housing estate to the north from the runway, and the II Pułku Lotniczego housing estate to the south from it. In this part there are still remains of the former hangar belonging to the airport.

The fact that both housing estates are located on both sides of the runway makes it the main and characteristic element of the entire housing estate project in this area. Its linear shape is centrally emphasised by the St. Brother Albert church sitting next to it, which is an important compositional feature.

The runway still constitutes a characteristic and unique element in the scale of not just the housing estates, but the entire city. Due to its spatial, historical, and cultural values\(^{15}\) it has a potential for the creation of a public space of a supralocal character\(^{16}\).

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\(^{12}\) Due to their different character they are usually referred to as the so-called positive and negative spaces. The positive ones are those which are clearly defined by walls of buildings. Their opposition are negative spaces, in which buildings are perceived as three-dimensional shapes against the background of a two-dimensional plane.

\(^{13}\) The II Pułku Lotniczego housing estate, located at the southern side of the former runway, under a relevant provision of the ‘Study on Spatial Development Conditions and Directions of the City of Cracow’ is an area eligible to the block development rehabilitation.

\(^{14}\) http://www.muzeumlotnictwa.pl/index.php/muzeum/historia (as of January 2016)

\(^{15}\) ‘Study of Spatial Development Conditions and Directions’ recommends the creation of ‘Lotnisko’ Cultural Park, which would be a form of protection of landscape (landscape of the Cracow Fortress) and cultural heritage [in:] Amendment to the ‘Study on Spatial Development Conditions and Directions for the City of Cracow’, passed in the Resolution No. XII/87/03 of the Municipal Council of Cracow dated 16 April 2003. Volume II – Principles and Directions of Spatial Management, Cracow 2014, p. 64. Furthermore, a part of the airport has been entered in the inventory of monuments.
As an open space with the leading recreational function, unique in its form and function, it would stand the chance to become a complementary space. Like a backbone for the housing estates located on its sides, it would constitute an important completion and enrichment of the residential function, contributing to the improvement of the housing environment. In the context of the city it would also have a chance to considerably enrich the system of open spaces, especially in the eastern part of Cracow.

The size and the characteristic oblong shape provide a possibility of a strong presence of the runway in the residents’ awareness as a recognisable and identifiable element in the scale of the city. It would constitute a clear unambiguous element among the most characteristic spaces in Cracow, like the Old Town with Planty Park, the Wawel Hill, and Blonia Park, and the urban project of Nowa Huta with Nowohuckie Meadows.

**Figure 3. ‘Identifiers of Cracow’**


**Source:** Prepared by the Author

Using a sign – an identifier in order to illustrate and characterise a given space is particularly important in the process of building of the identity of the place. In the context of housing estates,

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16 Under the spatial development plan currently in force the very runway is described as a protected area, with special attention paid to selected parts of its surface [in:] http://www.bip.krakow.pl/?dok_id=57145

The problem of arrangement of the runway together with the revitalisation of the housing estates became also the subject matter of international student workshops Eco Rehab, which were held in 2012, and in which the Author took part as a team leader.
this issue is especially sensitive. Due to their frequently negative image and connotations leading to dubbing them ‘blokowisko’, which in Polish means a drab or bleak housing project, pejorative in meaning, building of a new image of a housing estate is extremely important. Public spaces are crucial in the process of building of the identity of housing estates; hence in case of the housing estates in Czyżyny the runway used as an available public space would strengthen their attractiveness considerably. On one hand, thanks to their recognisability in the scale of the entire city, and on the other – by references made to the history of this place. Referring to the cultural legacy constitutes an important aspect of revitalisation. In case of large-panel housing estates, which numerous times were erected in empty spaces, without any specific urban context, the value of this place is worth exposing. The location of Lotników Park and the edifice of the Polish Aviation Museum in the close vicinity of the runway additionally strengthens the significance of this place and of its cultural values. Each of these elements constitutes a separate value, but when they function together their significance and attractiveness grow. Their close spatial and functional relations may also contribute considerably to the process of building of the continuity of the system of public spaces. It is also fostered by the linear character of the space of the runway. On one hand it joins two housing estates like a seam; on the other it leads their user outside their territory. Appropriate arrangement of space, especially in places of overcoming of urban barriers, offers a chance to include the space of the housing estates in the network of public spaces of the city. A sensitive point here is overcoming the barrier of Izydora Stella-Sawickiego street, giving the beginning to the continuity of this space towards the city centre. It is also of key importance to search for continuation of the linear public space towards the east, that is the old part of Nowa Huta. The former runway would stand a chance to contribute to considerable strengthening and building of the continuity of the system of public spaces, especially in the north-eastern part of the city, which is largely dominated by residential development with the structure of housing estates. Special attention should be paid to the search of functional and spatial relations with the green areas located nearby and a bit further, e.g. the Garden of Experiences, Tysiąclecia Park, Lotników Park, Nowohuckie Meadows, Bierczyckie Planty Park, and a bit further to the east the planned Dłubnia River Park, as well as such important spaces as Centralny Square, Technology Park, Cracow Arena, and university campuses. In the context of the nearest surroundings, that is the housing estates in Czyżyny, the arrangement of the former runway provides an opportunity to strengthen the hierarchy of public spaces arranged according to its character, use and accessibility. It is also a chance to add legibility to the composition and to arrange the development structure of these housing estates in order by using the former runway as a backbone – a linear space, enriched with the main local relations in the territory of the housing estates which should be strengthened. This pertains to e.g. the link with Gen. Stanislaw Skalski Park, and from the south – to the connection with the compositional axes of the housing estate in the form of a promenade and streets. In case of the

17 I.e. campuses of the Academy of Physical Academy and the Cracow University of Technology.
housing estates, taking into account their ‘inherent’ defects relating to nobody’s space, to evoking of the feeling of loss, these issues acquire special significance.

The future - the current reality

Regrettably, not only is the potential connected with the spaces of the housing estates in Czyżyny with the former runway not used in any way, but it is actually wasted. Additions of buildings in empty areas of the housing estates in quite a chaotic manner, also in the direct vicinity of the runway, usually have the form of residential buildings, characterised by a rather random arrangement and form, far from being a compositional completion of the housing estates. Moreover, spatial chaos is aggravated by minor service outlets that mushroom all around. Nevertheless, the period of the most significant and largest investments in Czyżyny is the second quarter of the 21st century. They are implemented predominantly at the southern side of the runway, to the east from the II Pułku Lotniczego housing estate. Fenced buildings with the predominantly residential function are erected under the slogan of ‘New Czyżyny’. The plans also provide for the demarcation of a part of the former runway, which is to constitute a recreational space, accessible exclusively for residents of the newly erected buildings.

Figure 4. ‘Structure of the existing housing estates with the new investment (New Czyżyny)’

The investment-related activities undertaken seem to defy numerous principles, not just those which govern the creation of a valuable housing environment, contributing to the appearance and development of spaces of the city with all its flaws. These are also measures which are unfavourable in the context of a sensitive relation with large-panel housing estates. They are characterised by the total separation from what already exists, both in conceptual terms – giving the new investment a name ‘New Czyżyny’, they do not take into account what is already there, as well as in physical terms – by the lack of any spatial connection. Therefore, instead of supporting and complementing what is of key importance in case of housing estates, they are in fact isolated due to the construction of a ghetto for the rich. Such activities constitute a solid contribution to strengthening of the social polarisation and the exclusion it entails.

The predominantly residential structures that are added to this space strengthen the monofunctionality of the housing estates, which is broadly recognised as one of the most important problems. This investment does not contribute to the improvement of the legibility of composition of the housing estate nor to the strengthening of the space gradation, either. The area of the former runway, with a potential to become a public space in the supralocal scale, is becoming a space accessible only for the ‘chosen ones’. Fenced areas intensify the lack of connections and continuity of public spaces. The new investment devaluates one of the most significant spaces in the city, that is the runway of the former airport.

Considering such a characteristic position of the former runway in the history and spatial development of Cracow, the currently undertaken measures in Czyżyny are not beneficial for the development of the city, and most of all for the inhabitants of the housing estates located nearby. The very territory of the runway, still free from any development, constitutes immense potential, which may contribute to the improvement of the quality of the housing environment of the large-panel housing estates, as well as to the process of building of continuity and complementarity of public spaces in the scale of the entire city. Not only does it require awareness of the rank of the problem, but most of all it calls for appropriate actions to be taken by decision-makers.

Revitalisation of large-panel housing estates responding to their problems and set to extract their potential constitutes a chance to create a valuable housing environment, constituting an integral part of the city. Making use of the main resource of housing estates, that is open spaces, seems to be of key importance in this context. Exposing their unique features and spatial values may play an important role in the context of the housing estate itself, as well as in the scale of the city. What is crucial here is the creation, or extraction, of functional and spatial relations within the housing estate structure and its surrounding areas. Measures taking the aforementioned aspects into account offer a chance to create attractive complementary spaces, contributing to the process of building of housing estate areas, as well as a chance to return to the broadly understood sense of the city.

“The best way to predict the future is to invent it”
Immanuel Kant
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